(54) Title: DATA COMPRESSION SYSTEM AND METHOD
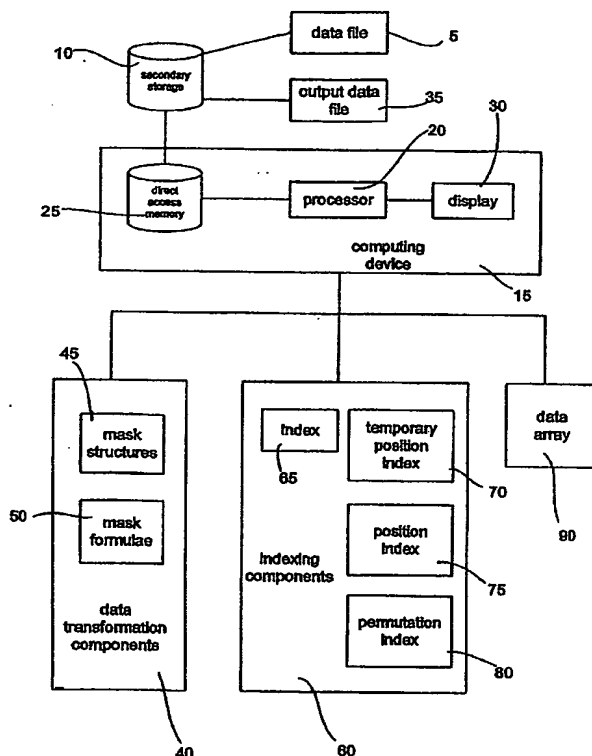
(57) Abstract: The invention provides a method of compressing a data file comprising a sequence of bytes of a length greater than or equal to a predefined length, the method including the steps of: retrieving the data file from a secondary storage device; storing the data file in direct access memory; calculating the frequency of unique byte values within a sub-sequence of the data file, the sub-sequence having a length not exceeding the predefined length; creating an index for the sub-sequence, the index including a data value representing the calculated frequency of unique byte values within the sub-sequence; and on the sub-sequence having a frequency of unique byte values below a predetermined threshold, applying a data transformation to the sub-sequence to increase the frequency of unique byte values in the sub-sequence and adding to the index a data value representing the data transformation; on the sub-sequence having a frequency of unique byte values above a predefined threshold, adding to the index a data value representing the position of one or more unique values within the sub-sequence; creating an output data file, the data file having a file type identifier; and adding the index to the output data file.